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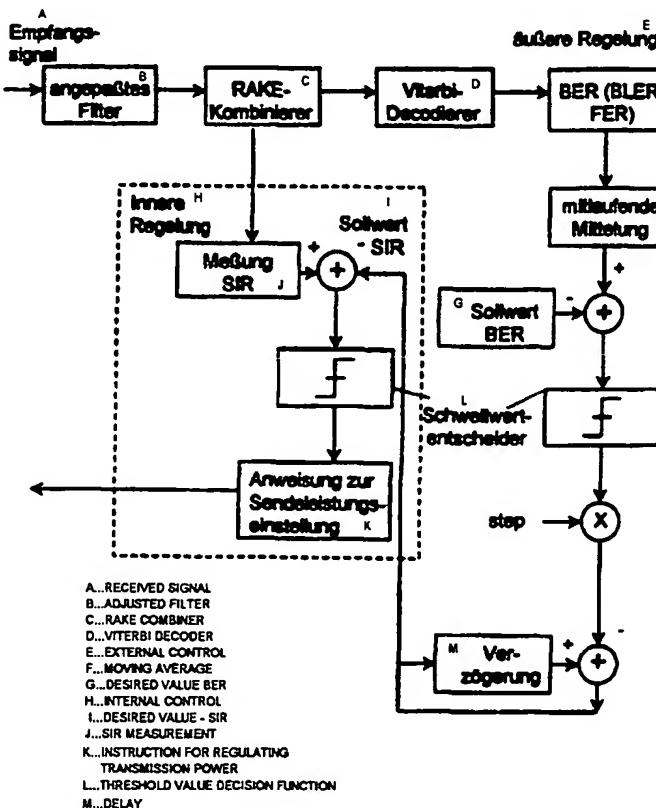
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[Fortsetzung auf der nächsten Seite]

(54) Title: METHOD FOR REGULATING THE TRANSMISSION POWER OF RADIO STATIONS IN A CDMA RADIO COMMUNICATIONS SYSTEM

(54) Bezeichnung: VERFAHREN ZUR SENDELEISTUNGS-EINSTELLUNG VON FUNKSTATIONEN IN EINEM CDMA-FUNK-KOMMUNIKATIONSSYSTEM



(57) Abstract: The invention relates to a method for regulating the transmission power of radio stations in a W-CDMA radio communications system, whereby an averaging of the quality evaluation is carried out on the receive side which guarantees a more precise criterion for the quality of the transmission conditions. A temporal variance of the received signal is determined on the receive side and an adjustment which is inversely proportional to the variance of the received signal is made to the averaging time for the mean value. If the averaging time has not been predetermined in a fixed manner, but follows the changes in the ratios of the radio interface, the regulation of the transmission power can be individually improved for each connection.

(57) Zusammenfassung: Beim erfindungsgemäßen Verfahren zur Sendeleistungseinstellung von Funkstationen in einem W-CDMA Funk-Kommunikationssystem wird empfangsseitig eine Mittelung der Qualitätsbewertung durchgeführt, die ein genaueres Kriterium für die Qualität der Übertragungsbedingungen garantiert. Es wird empfangsseitig eine zeitliche Varianz des Empfangssignals bestimmt und die Mittelungszeit für den Mittelwert umgekehrt proportional zur Varianz des Empfangssignals angepasst. Ist die Mittelungszeit nicht fest vorgegeben,

[Fortsetzung auf der nächsten Seite]

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(81) Bestimmungsstaaten (*national*): CN, JP, US.

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Veröffentlicht:

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(88) Veröffentlichungsdatum des internationalen Recherchenberichts:

13. Juni 2002

Zur Erklärung der Zweibuchstaben-Codes und der anderen Abkürzungen wird auf die Erklärungen ("Guidance Notes on Codes and Abbreviations") am Anfang jeder regulären Ausgabe der PCT-Gazette verwiesen.

INTERNATIONAL SEARCH REPORT

Inten. Application No.
PCT/DE 00/00631

A. CLASSIFICATION OF SUBJECT MATTER
IPC 7 H04B/005

According to International Patent Classification (IPC) or to both national classification and IPC

B. FIELDS SEARCHED

Minimum documentation searched (classification system followed by classification symbols)
IPC 7 H04B

Documentation searched other than minimum documentation to the extent that such documents are included in the fields searched

Electronic data base consulted during the international search (name of data base and, where practical, search terms used)

EPO-Internal, INSPEC

C. DOCUMENTS CONSIDERED TO BE RELEVANT

| Category * | Citation of document, with indication, where appropriate, of the relevant passages | Relevant to claim No. |
|------------|--|------------------------------------|
| X | EP 0 853 393 A (NIPPON TELEGRAPH & TELEPHONE) 15 July 1998 (1998-07-15) | 1, 4, 11-13, 15, 16 2, 17 |
| Y | abstract; figures 2-4 column 1, line 45 -column 2, line 4 column 3, line 1 -column 4, line 47 ---- -/- | |

Further documents are listed in the continuation of box C.

Patent family members are listed in annex.

* Special categories of cited documents:

- 'A' document defining the general state of the art which is not considered to be of particular relevance
- 'E' earlier document but published on or after the international filing date
- 'L' document which may throw doubts on priority, claim(s) or which is cited to establish the publication date of another citation or other special reason (as specified)
- 'O' document referring to an oral disclosure, use, exhibition or other means
- 'P' document published prior to the international filing date but later than the priority date claimed

- 'T' later document published after the international filing date or priority date and not in conflict with the application but cited to understand the principle or theory underlying the invention
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- 'Y' document of particular relevance; the claimed invention cannot be considered to involve an inventive step when the document is combined with one or more other such documents, such combination being obvious to a person skilled in the art.
- '&' document member of the same patent family

Date of the actual completion of the international search

19 January 2001

Date of mailing of the International search report

31 01 2001

Name and mailing address of the ISA

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INTERNATIONAL SEARCH REPORT

| | |
|-----------------|----------------------|
| Inter. | Final Application No |
| PCT/DE 00/00631 | |

C.(Continuation) DOCUMENTS CONSIDERED TO BE RELEVANT

| Category | Citation of document, with indication, where appropriate, of the relevant passages | Relevant to claim No. |
|----------|--|-----------------------|
| Y | HOLTZMAN J M: "ADAPTIVE MEASUREMENT INTERVALS FOR HANDOFFS" PROCEEDINGS OF THE INTERNATIONAL CONFERENCE ON COMMUNICATIONS, US, NEW YORK, IEEE, vol. -, 14 June 1992 (1992-06-14), pages 1032-1036, XP000326826 ISBN: 0-7803-0599-X abstract page 1032, right-hand column, line 18 - last line page 1033, left-hand column, line 11 - line 40 page 1033, right-hand column, line 1 - line 14 ----- | 2,17 |
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| A | DE 197 18 942 A (MOTOROLA INC) 13 November 1997 (1997-11-13) abstract; figures 1,4 column 8, line 21 - line 59 column 17, line 40 - line 67 ----- | 1,2,5, 16,17 |
| A | WO 96 09696 A (LIIMATAINEN JUKKA ;NOKIA TELECOMMUNICATIONS OY (FI); JOLMA PETRI () 28 March 1996 (1996-03-28) page 2, line 34 -page 3, line 13 page 4, line 25 - last line page 6, line 21 - line 27 ----- | 1,2,4, 11,16,17 |
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| | | -/- |

INTERNATIONAL SEARCH REPORT

Inte
nal Application No
PCT/DE 00/00631

C.(Continuation) DOCUMENTS CONSIDERED TO BE RELEVANT

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| X | US 5 745 520 A (STEWART KENNETH A ET AL) 28 April 1998 (1998-04-28) | 1 |
| A | abstract column 2, line 25 - line 62 column 6, line 5 - line 45; figure 4 _____ | 14 |

INTERNATIONAL SEARCH REPORT

International application No.

PCT/DE 00/00631

Box I Observations where certain claims were found unsearchable (Continuation of item 1 of first sheet)

This international search report has not been established in respect of certain claims under Article 17(2)(a) for the following reasons:

1. Claims Nos.: because they relate to subject matter not required to be searched by this Authority, namely:

2. Claims Nos.: because they relate to parts of the international application that do not comply with the prescribed requirements to such an extent that no meaningful international search can be carried out, specifically:

3. Claims Nos.: because they are dependent claims and are not drafted in accordance with the second and third sentences of Rule 6.4(a)

Box II Observations where unity of invention is lacking (Continuation of item 2 of first sheet)

This International Searching Authority found multiple inventions in this international application, as follows:

See supplemental sheet FURTHER INFORMATION PCT/ISA/210.

1. As all required additional search fees were timely paid by the applicant, this international search report covers all searchable claims.
2. As all searchable claims could be searched without effort justifying an additional fee, this Authority did not invite payment of any additional fee.
3. As only some of the required additional search fees were timely paid by the applicant, this international search report covers only those claims for which fees were paid, specifically claims Nos.:

4. No required additional search fees were timely paid by the applicant. Consequently, this international search report is restricted to the invention first mentioned in the claims: it is covered by claims Nos.:

Remark on Protest

The additional search fees were accompanied by the applicant's protest.



No protest accompanied the payment of additional search fees.

INTERNATIONAL SEARCH REPORT

International application No.

PCT/DE 00/00631

FURTHER INFORMATION PCT/ISA/210

The International Searching Authority found that this International Application contains several inventions or groups of inventions, as follows:

1. Claims nos: 1-13, 14 (dep. on 2), 15-17

Determination of the temporal variance of the received signal and an inversely proportional adjustment to the averaging time for the mean value for the quality evaluation of the received signal. The quality evaluation can be based on a channel estimation, data detection or bit error rate. In addition, the adjustment value calculated from the mean value of the quality evaluation is applied to the desired value of an internal closed control.

2. Claims nos: 14 (dep. on 1)

Setting of the adjustment value calculated from the mean value of the quality evaluation to several possible values, in accordance with the size of the temporal variance.

INTERNATIONAL SEARCH REPORT

Information on patent family members

| | |
|-----------------|--------------------------|
| Inte | rnational Application No |
| PCT/DE 00/00631 | |

| Patent document cited in search report | Publication date | Patent family member(s) | | Publication date |
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